

Appendix B

Chart Identifying Support for Each Claim in the Specification

Claim Language	Spec. Location	Specification Language
3. (Twice Amended) A method for storing programming at a programming storage station, said storage station having a storage device capable of storing programming,	Page 325, lines 5 - 8	Programming ... on prerecorded videotapes and videodiscs. ... on video recorders, 76 and 78, or other similar equipment well known in the art, ...
and an automatic control unit for controlling said storage device to store information, said method comprising the steps of:	Page 326, lines 19 - 20 Page 329, lines 13 - 16	Cable program controller and computer, 73, is the central automatic control unit for the transmission station. ... causes computer, 73, ... to cause said selected recorder, 76 or 78, to ... record programming; ...
storing a control signal operative to store programming;	Page 326, line 25 to page 327, line 8	Computer, 73, has capacity for maintaining records on the station's programming schedule and records on the status of operating apparatus. Computer, 73, has means for receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, what kind of programming the unit is--e.g., conventional television, television/computer combined medium programming, etc.--and how the station should process the programming. Computer, 73, is preprogrammed to receive and record said schedule information and may record it in RAM or on an appropriate recording medium such as a magnetic disk at a disk drive.
locating an available programming storage space among a plurality of available storage spaces based on said stored control signal operative to store programming; and	Page 331, lines 17-21 Page 331, lines 25 - 31 Page 332, lines 5 - 7	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. According to the schedule recorded at computer, 73, ... D should play on the channel modulated by modulator, 83, immediately after Y ends. ... causes computer, 73, automatically to locate a place on the tape loaded on recorder, 78, that contains sufficient space for recording D.

Claim Language	Spec. Location	Specification Language
storing first programming at said located available programming storage space.	Page 332, lines 23-31	Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D.
4. (Twice Amended) The method of claim 3, wherein said control signal operative to store programming designates programming required at a future time, said method further comprising the step of	Page 326, lines 30 - 35 Page 346, lines 3-10	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit, ... The computers, 73, of said intermediate stations are preprogrammed to process the information of said cue-to-select messages (#8), and receiving any given one of said messages causes each computer, 73, of one of said intermediate transmission stations to determine whether the "program unit identification code" information of said one matches schedule information previously inputted to said computer, 73, by said distribution station.
- identifying required programming.	Page 346, lines 10-13	Determining a match causes said computer, 73, to cause apparatus of its station to record the programming of the program unit transmitted immediately after said one.
5. (Twice Amended) The method of claim 3, wherein said control signal operative to store programming designates programming required at a future time, said method further comprising the step of	Page 326, lines 30 - 35 Page 346, lines 3-10	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit, ... The computers, 73, of said intermediate stations are preprogrammed to process the information of said cue-to-select messages (#8), and receiving any given one of said messages causes each computer, 73, of one of said intermediate transmission stations to determine whether the "program unit identification code" information of said one matches schedule information previously inputted to said computer, 73, by said distribution station.
identifying programming which is not required.	Page 329, lines 23-32	Determining that particular incoming programming is not scheduled for transmission can cause computer, 73, to cause station apparatus to discard the transmission of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier.

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	Page 346, lines 13-15	69. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches no particular preprogrammed schedule information. Not determining a match causes said computer, 73, to cause apparatus of its station not to record said program unit.
6. (Twice Amended) The method of claim 3, further comprising the step of comparing information received at said programming storage station to said control signal operative to store programming.	Page 328, lines 2-13	By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
7. (Twice Amended) The method of claim 3, further comprising the steps of: inputting a portion of a stored signal to said automatic control unit; and	Page 330, lines 10-19	Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point).
processing said inputted portion to locate said available programming storage space.	Page 332, lines 4-13	So determining causes computer, 73, automatically to locate a place on the tape loaded on recorder, 78, that contains sufficient space for recording D. (Computer, 73, can contain records that identify how space on particular tapes is allocated or it can locate this space by playing the tapes, retaining information of "program unit identification code" and distance information prerecorded on said tapes [or the absence of such information], and analyzing said information in a predetermined fashion.)
20. (Amended) The method of claim 3, wherein said first programming includes an incomplete programming element, and second programming operates to complete said incomplete programming element by processing a class of data, said method further comprising the step of	Page 354, lines 5-6 Page 354, line 35 to page 355, line 14	AUTOMATING INTERMEDIATE STATION COMBINED MEDIUM OPERATIONS ... (INCLUDING EXAMPLE #9) For sake of example, program units, Q and D, above are combined medium programming of the same sort as "Wall Street Week" except that computer, 73, must insert one or more particular locally generated program instruction sets into a local transmission of the programming of each of said program units. For example, program unit Q is a spot commercial of a supermarket chain that describes discounts and so-called "cents-off coupon specials" at local

Claim Language	Spec. Location	Specification Language
	Page 356, lines 9-27	<p>supermarkets. The particular formulas that apply to discounts and the particular items on special vary from specific supermarket to specific supermarket and from time to time, and the information in the embedded program instruction sets of any given transmission of unit Q must reflect the particular formulas and items that apply at specific local supermarkets at the time of said transmission.</p> <p>Computer program instructions, of the sort well known in the art, are also inputted to computer, 73, and computer, 73, is caused to execute said instructions. Executing said instructions causes computer, 73, to generate information of a program instruction set. (Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")</p> <p>For example, when executed, one particular intermediate generation set that is inputted to computer, 73, causes computer, 73, in a fashion that is described more fully below, to generate particular program instruction set information of the combined medium programming of program unit Q.</p> <p>Computer, 73, can receive and be caused to execute intermediate generation set information in any fashion that a computer receives and is caused to execute computer program instructions.</p>
	Page 357, lines 20-29	<p>Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick".</p>
	Page 358, lines 10-21	<p>When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station. The set information so generated may consist of computer program instructions and/or data.</p>

[illegible]

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		<p>a is 1000.00 p is .00625 q is .12 d is .1 Z is 275 r is .007 s is 2.00 dd is .11</p>
22. (Amended) The method of claim 20, wherein said class of data designates subscriber data, said method further comprising the step of	Page 358, lines 1-9	Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. (For example, in the case of unit Q, the intermediate generation set lacks information of the particular discount formulas and items offered as cents-off coupon specials that apply at the scheduled time of the transmission of unit Q at the particular supermarket or markets that are local to the station of Fig. 6.)
storing subscriber data.	Page 358, lines 10-20	When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item-of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station.
30. (Amended) The method of claim 3, wherein a control signal causes said automatic control unit to control a peripheral device, said method further comprising the step of	<p>Page 40, lines 17 - 25</p> <p>Page 330, lines 5 - 35</p>	<p>The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations.</p> <p>(The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)</p> <p>SPAM signals control and coordinate a wide variety of subscriber stations.</p> <p>Computer, 73, has capacity for determining what programming is prerecorded on the magnetic tapes (or other recording media) loaded on the recorders, 76 and 78, and capacity for positioning the start points (or other selected points) of program units at the play heads of said recorders. Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance</p>

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	<p>Page 36, lines 32 – 33</p> <p>Page 156, line 33 – page 157, line 10. See Fig. 3A.</p>	<p>detector, 34, which acts to detect the digital signal information embedded in said information, using standard detection techniques well known in the art, and inputs detected signal information to controller, 39, which is considered in greater detail below.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39J.</p>
<p>31. (Twice Amended) The method of claim 30, wherein said peripheral device comprises a switch operatively connected to said storage station.</p>	<p>Page 335, line 26 - page 336, line 13</p>	<p>In due course, a particular first instance of the aforementioned SPAM cueing message is embedded in said first network transmission and transmitted at the program originating studio that originates said transmission (hereinafter, said first instance is called the "first- network-cue-to-transmit-locally message (#8)") then, after an interval of time equal to the duration of the playing of unit Q passes, a particular second instance of said message is embedded at said studio and transmitted in said transmission (hereinafter, said second instance is called the "first- network-cue-to-transmit-network message (#8)").</p> <p>Said first and second instances are each detected at that decoder of signal processor system, 71, that continuously processes the transmission outputted by distribution amplifier, 63, and are inputted to computer, 73, with appropriate source mark information.</p> <p>Receiving said first instance causes computer, 73, under control of instructions of said schedule, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches to cease transferring the transmission received at receiver, 53, to modulator, 83, and to commence transferring the output of recorder, 76, to modulator, 83.</p>
<p>32. (Amended) The method of claim 30, wherein said peripheral device comprises a memory operatively</p>	<p>Page 335, line 26 - page 336, line 13</p>	<p>In due course, a particular first instance of the aforementioned SPAM cueing message is embedded in said first network transmission and transmitted at the program originating studio that originates said transmission</p>

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		band signal. This base band signal is then transferred through separate paths to three separate detector devices. The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. Path A inputs to a standard line receiver, 33, well known in the art. Said line receiver, 33, receives the information of one or more of the lines normally used to define a television picture. It receives the information only of that portion or portions of the overall video transmission and passes said information to a digital detector, 34, which acts to detect the digital signal information embedded in said information, using standard detection techniques well known in the art, ...
detecting an identifier that identifies a portion of said first programming.	Page 330, lines 10 - 16 Page 90, lines 1-3	Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information ... (Hereinafter, meter-monitor information that identifies the program unit of a given program may also be called the "program unit identification code".)
34. (Amended) The method of claim 33, wherein said television signal comprises an analog television signal.	Page 324, lines 21-33	The means and methods for transmitting conventional programming are well known in the art.
35. (Amended) The method of claim 30, wherein said control signal is detected in a information transmission that contains said first programming, said method further comprising the step of storing said control signal with said first programming.	Page 330, lines 10 - 19	Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point).
36. (Amended) The method of claim 35, wherein said control signal is embedded in said information transmission.	Page 330, lines 10 - 19	Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point).

Claim Language	Spec. Location	Specification Language
37. (Twice Amended) A method for storing programming at a storage station, said storage station having	Page 325, lines 5 - 8	Programming ... on prerecorded videotapes and videodiscs. ... on video recorders, 76 and 78, or other similar equipment well known in the art, ...
a plurality of storage locations each capable of storing at least one of television and radio programming;	Page 331, lines 21 - 25 Page 324, lines 11 - 13	For example, ... program units ... D and Q are recorded on the video tape loaded on recorder, 76, with D first. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, ...
a transfer device capable of communicating said at least one of television and radio programming to and from each of said plurality of storage locations;	Page 332, lines 27 - 29 Page 333, lines 17 - 19	... cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. ... causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76.
and a controller for controlling said plurality of storage locations and said transfer device, said method comprising the steps of:	Page 326, lines 19 - 20 Page 329, lines 13 - 17	Cable program controller and computer, 73, is the central automatic control unit for the transmission station. ... causes computer, 73, in its preprogrammed fashion, ... to cause said selected recorder, 76 or 78, to turn on ... and ... cause matrix switch, 75, to configure its switches ...
receiving an information transmission including at least one of television and radio programming;	Page 343, lines 26 - 32 Page 340, lines 13 - 14 Page 324, lines 11 - 13 Page 344, lines 24 - 29	Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite. Using the capacity described above for identifying, selecting, and recording received programming; ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, ... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, ... P, Q, R, ...
selecting a storage location;	Page 344, lines 4 - 8	Automatically, at the station of Fig. 6, the computer, 73, causes matrix switch, 75, to configure its switches ... to a selected primary recorder, 76; causes said recorder, 76, ...

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<p>modifying said information transmission in accordance with said intermediate generation set.</p>	<p>Page 363, line 34 - page 365, line 21</p>	<p>instructions.</p> <p>Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. Automatically, computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; computes the value of variable b, under control of intermediate generation set instructions of equation (2), to be 62.21875; computes the value of variable c, under control of intermediate generation set instructions of equation (3), to be 2.117; and replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" that is among the aforementioned generally applicable information of said program instruction set and is:</p> <p>$Y = a + b + (c * X)$ [which is equation (1) in the language of the IBM BASIC of the IBM Personal Computer Hardware Reference Library] with said selected information of a and the so computed information of b and c to become formula-and-item-of-this- transmission information of:</p> <p>$Y = 1000.00 + 62.21875 + (2.117 * X)$ [which is formula-and-item-of-this-transmission information in said BASIC]. Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory (which compiling could be done, in the case of a program written in IBM BASIC, with the IBM BASIC compiler of the IBM Personal Computer Computer Language Series). Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, (and may have been transmitted to computer, 73, in the generally applicable program instruction set information if said intermediate generation set); generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, (which linking could be done, in the case of a program compiled by the IBM BASIC Compiler with the linker program of the IBM Disk Operating System of the IBM Personal Computer Computer Language Series). One of said other compiled object modules is a module that, when accessed in a fashion well known in the art, computes the shortest vehicle driving distance between any two locations in the local vicinity of the station of Fig. 6 when passed two street addresses of said vicinity. (Hereinafter, the program</p>

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		instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)
	Page 365, lines 22-31	Executing the information of said intermediate generation set causes computer, 73, also to generate a particular associated data module. (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a program instruction set is called a "data module set," and any given intermediate generation set may cause generation of information of a data module set or sets in addition to or rather than generating information of a program instruction set or sets.)
	Page 369, line 23 to page 370, line 7	Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information; and selects and transmits to generator, 82, complete information of said data-module-set message (#9).
	Page 371, line 12 - page 372, line 6	... instruction-set message (#9) causes computer, 73, to generate a second outbound SPAM message that includes information of said program instruction set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said second outbound SPAM message is called the "program-instruction-set message (#9).") Automatically, computer, 73, selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information. Then, automatically, computer, 73, selects and transmits to

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		<p>generator, 82, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter-monitor information; any required padding bits; complete information of the aforementioned file that is at the aforementioned program- set-to-transmit memory of computer, 73, and that is said program instruction set of Q; and information of a SPAM end of file signal. Said selected and transmitted information is complete information of said program-instruction-set message (#9).</p> <p>Receiving said information causes generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said program-instruction-set message (#9) to said system, 93.</p>
39. (Twice Amended) The method of claim 38, wherein a signal generator is operatively connected to said storage station and	Page 354, lines 18-28	Fig. 6 shows ... signal generators, 82, 86, and 90 Said generators, 82, 86, and 90, have capacity for receiving control information and programming in a transmission from computer, 73, and distinguishing, in a predetermined fashion, said control information from said programming.
modifies said information transmission by embedding information into said information transmission, said method further comprising the steps of:	Page 371, line 12 - page 372, line 6.	See this citation in claim 38.
controlling said storage station to transfer said information transmission to said signal generator;	Page 367, lines 2 – 9. See Figs. 6A and 6B.	Receiving said message and mark causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches so as to cease transferring programming inputted from distribution amplifier, 63, to modulator, 83, then to commence transferring the output of recorder, 76, to modulator, 83, which causes the transmission of unit Q to field distribution system, 93.
generating at least some of said information in accordance with said intermediate generation set; and	Page 363, line 34 - page 365, line 21.	See this citation in claim 38.
communicating said information to said signal generator.	Page 371, line 12 - page 372, line 6.	See this citation in claim 38.
40. (Twice Amended) The method of claim 39, wherein a transmitter is operatively connected to said signal generator, said method further comprising the step of transmitting said modified information transmission.	Page 371, line 35 - page 372, line 6. See Figs. 6A and 6B.	Receiving said information causes generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said program-instruction-set message (#9) to said system, 93.

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<p>42. (Amended) The method of claim 38, wherein said information transmission is modified by embedding at least one of video and audio into said information transmission.</p>	<p>Page 357, lines 21-29</p>	<p>Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick".</p>
	<p>Page 369, line 24 - page 371, line 3</p>	<p>... causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information; and selects and transmits to generator, 82, complete information of said data-module-set message (#9). In selecting and transmitting said complete information, computer, 73, automatically selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter-monitor information; any required padding bits (the requirement for and number which computer, 73, determines in a predetermined fashion); complete information of said data file, DATA_OF.ITS; and information of a SPAM end of file signal.</p> <p>...</p> <p>Receiving the information of said data-module-set message (#9) causes generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said data-module-set message (#9) to said system, 93.</p>
	<p>Page 488, lines 21 - 27</p>	<p>... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.</p>

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	Page 501, lines 17 - 25	... microcomputer, 205, ... selects from said D:DATA_OF.ITS file information of the aforementioned southwest delivery route telephone number, "456-1414", and causes binary image information of said number to be placed at bit locations that produce video image information in the lower middle portion of a video screen.
45. (Twice Amended) The method of claim 37, further comprising the step of embedding said intermediate generation set in said information transmission.	Page 357, lines 1-16	For example, in the case of television programming such as the programming of unit Q, the particular intermediate set that is inputted to computer, 73, is located on the recording medium of unit Q within the defined space of program unit Q immediately following the point at which unit Q starts and before the point at which the conventional television information of Q commences. Said intermediate generation set information is embedded in the so-called "full frame" video on each successive frame until complete information of said set information is embedded; that is, embedding of said set information commences at the first line of the normal transmission location and continues on each successive detectable line of a first frame and, continuing in this fashion, on each successive frame until all intermediate generation set information is embedded.
46. (Twice Amended) The method of claim 45, wherein said information transmission includes television programming, said intermediate generation set being embedded in said information transmission before said television programming.	Page 357, lines 1-8	For example, in the case of television programming such as the programming of unit Q, the particular intermediate set that is inputted to computer, 73, is located on the recording medium of unit Q within the defined space of program unit Q immediately following the point at which unit Q starts and before the point at which the conventional television information of Q commences.
51. (Twice Amended) A method of storing information at a storage station, said storage station including a storage location capable of storing programming,	Page 325, lines 5 - 8	Programming ... on prerecorded videotapes and videodiscs. ... on video recorders, 76 and 78, or other similar equipment well known in the art, ...
a receiver for receiving at least audio from a remote transmitter station,	Page 324, lines 24 - 28	Transmissions are received from a satellite by ... TV receivers, 53, 54, 55, and 56. ... television video and audio receivers, 58 and 59.
a transfer device capable of communicating said programming to and from said storage location,	Page 332, lines 27 - 29 Page 333, lines 17 - 19	... cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. ... causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76.
and a processor capable of	Page 329, lines 13 - 17	... causes computer, 73, in its preprogrammed fashion, ... to

Claim Language	Spec. Location	Specification Language
controlling said storage location and said transfer device, said method comprising the steps of:		cause said selected recorder, 76 or 78, to turn on ... and to cause matrix switch, 75, to configure its switches ...
receiving an information transmission including programming,	Page 343, lines 26 - 32 Page 344, lines 24 - 30	Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite. ... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, ... In succession, said station transmits units A, B, C, ... P, Q, R, ...
a first portion of said programming to be outputted for a duration of time,	Page 344, lines 26 - 28 For example, page 491, lines 30 - 35	... the program units of 26 spot commercials, each of thirty seconds duration. Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
only some of said duration of time including a time interval of specific relevance,	Page 27, lines 21 - 23 For example, page 492, lines 27 - 30 and Page 493, ll. 16-18	In addition, personalized programming is displayed only when it is of specific relevance to the conventional television programming of said combined medium. ... and the subscriber of said station can hear said announcer's voice saying: "forty-six". Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, ...
a second portion of said programming including audio, at least said second portion of said programming being received from said remote transmitter station;	Page 355, ll. 15-17 Page 356, line 28 - page 357, line 5 (note storing step below) Page 357, lines 24 - 28	Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations. ... in the preferred embodiment, ... in the case of television programming such as the programming of unit Q, the particular intermediate set that is inputted to computer, 73, is located on the recording medium of unit Q within the defined space of program unit Q the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", ...
communicating said received information transmission to said storage location;	Page 344, lines 4 - 7	... at the station of Fig. 6, the computer, 73, causes matrix switch, 75, to configure its switches so as to transfer transmissions from receiver, 53, to a selected primary

Claim Language	Spec. Location	Specification Language
		recorder, 76; ...
storing said first and second portions of said programming at said storage location; and	Page 347, lines 4 - 5	... thereby causing said recorder, 76, to record the programming of program unit Q ...
storing at least one of computer code and data at said storage station,	Page 365, lines 7 - 21 Page 366, lines 11 - 18	... generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".) Automatically, computer, 73, places said selected information (and any other information so selected) in a particular file called DATA_OF.ITS until the information of said file constitutes a complete instance of a particular data module set of Q. (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)
said at least one of computer code and data being operative at an ultimate receiver station to enable said ultimate receiver station to select audio of said second portion and cause an audio output device to output said selected audio of said second portion during said time interval of specific relevance.	Page 485, lines 14 - 18 Page 488, lines 21 - 27 Page 492, lines 23 - 30	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F ... generates selected information of subsequent overlays in the following fashion. ... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM. Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
52. (Twice Amended) The method of claim 51, further comprising the steps of: communicating said at least one of said computer code and said data to said processor; and under control	Page 369, line 23 to page 370, line 7	Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution

Claim Language	Spec. Location	Specification Language
of said processor, modifying said programming in accordance with said at least one of said computer code and said data.		system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information; and selects and transmits to generator, 82, complete information of said data-module-set message (#9).
53. (Twice Amended) The method of claim 52, wherein said programming is modified by embedding information in said programming.	Page 369, line 23 to page 370, line 7	Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information; and selects and transmits to generator, 82, complete information of said data-module-set message (#9).
54. (Unchanged) The method of claim 52, wherein said programming is modified by combining audio into said programming.	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
55. (Twice Amended) A method of storing information at a storage station, said storage station including a storage location capable of storing programming.	Page 325, lines 5 - 8	Programming ... on prerecorded videotapes and videodiscs. ... on video recorders, 76 and 78, or other similar equipment well known in the art, ...
a receiver for receiving at least audio from a remote transmitter station,	Page 324, lines 24 - 28	Transmissions are received from a satellite by ... TV receivers, 53, 54, 55, and 56. ... television video and audio receivers, 58 and 59.
a transfer device capable of	Page 332, lines 27 - 29	... cause switch, 75, to configure its switches so as to transfer

Claim Language	Spec. Location	Specification Language
communicating said programming to and from said storage location,	Page 333, lines 17 - 19	the output of recorder, 76, to the input of recorder, 78. ... causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76.
and a processor capable of controlling said storage location and said transfer device, said method comprising the steps of:	Page 329, lines 13 - 17	... causes computer, 73, in its preprogrammed fashion, ... to cause said selected recorder, 76 or 78, to turn on ... and to cause matrix switch, 75, to configure its switches ...
receiving an information transmission including said programming,	Page 343, lines 26 - 32 Page 344, lines 24 - 30	Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite. ... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, ... In succession, said station transmits units A, B, C, ... P, Q, R, ...
a first portion of said programming including audio,	Page 357, lines 21-29	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick". And any given datum of generally applicable information may be specific information only of selected subscriber stations.
a first part of said audio to be outputted at an ultimate receiver station before a time interval of specific relevance	Page 27, lines 21 - 23 Page 478, line 35 - page 479, line 18 Page 491, lines 30 - 35	In addition, personalized programming is displayed only when it is of specific relevance to the conventional ... programming of said combined medium. ... at the station of Figs. 7 and 7F ... cause the video and audio output transmissions of microcomputer, 205, to be inputted to monitor, 202M. Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
a second part of said audio to be outputted at said ultimate receiver station after said time interval of specific relevance,	Page 27, lines 21 - 23 Page 492, lines 23 - 30	In addition, personalized programming is displayed only when it is of specific relevance to the conventional ... programming of said combined medium. Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said

Claim Language	Spec. Location	Specification Language
		microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
a second portion of said programming including video,	Page 478, lines 25 - 26	... television video and audio information of program unit Q.
at least said first portion of said signal being received from said remote transmitter station;	Page 343, lines 26 - 32 Page 344, lines 24 - 30	Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite. ... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, ... P, Q, R, ...
communicating said received information transmission to said storage location;	Page 344, lines 4 - 7	... at the station of Fig. 6, the computer, 73, causes matrix switch, 75, to configure its switches so as to transfer transmissions from receiver, 53, to a selected primary recorder, 76; ...
storing said first and second portions of said programming at said storage location; and	Page 347, lines 4 - 5	... thereby causing said recorder, 76, to record the programming of ... Q ...
storing at said storage station at least one processor instruction which is effective to modify said information transmission for transmission to said ultimate receiver station.	Page 347, lines 4 - 5 Page 344, lines 29 - 31 For example, page 367, lines 32 - 33 Page 369, lines 4 - 29	thereby causing said recorder, 76, to record ... program unit Q P, Q, R, ... Embedded in each of said program units are SPAM messages SPAM messages that are embedded in the prerecorded programming of Q. ... a series of SPAM messages that are embedded in the programming of Q and are addressed to ITS computers, 73. ... The first message of said series contains execution and meter-monitor segments. (Said first message is called, hereinafter, the "transmit-data-module-set message (#9)".) Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of

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<p>56. (Unchanged) The method of claim 55, wherein said at least one processor instruction is effective to modify said programming.</p>	<p>Page 369, lines 4 – 29</p>	<p>the programming of Q and transmitted to field distribution system, 93, ...</p> <p>... a series of SPAM messages that are embedded in the programming of Q and are addressed to ITS computers, 73.</p> <p>...</p> <p>The first message of said series contains execution and meter-monitor segments. (Said first message is called, hereinafter, the "transmit-data-module-set message (#9)".)</p> <p>Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, ...</p>
<p>57. (Twice Amended) A method of enabling a station of a particular kind to deliver complete programming, said station including</p>	<p>Page 354, lines 5-6</p> <p>Page 354, line 35 to page 355, line 14</p> <p>For "station of a particular kind," refer to page 40, l. 24 to p. 41, l. 12</p>	<p>AUTOMATING INTERMEDIATE STATION COMBINED MEDIUM OPERATIONS ... (INCLUDING EXAMPLE #9)</p> <p>For sake of example, program units, Q and D, above are combined medium programming of the same sort as "Wall Street Week" except that computer, 73, must insert one or more particular locally generated program instruction sets into a local transmission of the programming of each of said program units. For example, program unit Q is a spot commercial of a supermarket chain that describes discounts and so-called "cents-off coupon specials" at local supermarkets. The particular formulas that apply to discounts and the particular items on special vary from specific supermarket to specific supermarket and from time to time, and the information in the embedded program instruction sets of any given transmission of unit Q must reflect the particular formulas and items that apply at specific local supermarkets at the time of said transmission.</p> <p>SPAM signals control and coordinate a wide variety of subscriber stations. Said stations include so-called "local affiliate" broadcast stations that receive and retransmit single network transmissions; so-called "cable system headends" that receive and retransmit multiple network and local broadcast station transmissions; and so-called "media centers" in homes, offices, theaters, etc. where subscribers view programming. (Hereinafter, stations that originate broadcast transmissions are called "original transmission stations," stations that receive and retransmit broadcast transmissions are called "intermediate transmission stations", and stations where subscribers view programming are called "ultimate receiver stations.")</p> <p>At said stations, SPAM signals address, control, and coordinate diverse apparatus, and the nature and extent of</p>

Claim Language	Spec. Location	Specification Language
		the apparatus installed at any given station can vary greatly. SPAM signals control not only various kinds of receivers and tuners; transmission switches and channel selectors; computers; printers and video and audio display apparatus; and video, audio, and digital communications transmission recorders but also signal processor system apparatus including decoders; decryptors; control signal switching apparatus; and the communications meters, called <u>signal processors, of the present invention.</u>
a storage device, and said method comprising the steps of:	Page 325, lines 5 - 8	Programming ... on prerecorded videotapes and videodiscs. ... on video recorders, 76 and 78, or other similar equipment well known in the art, ...
storing programming at said storage device, said programming comprising	Page 359, lines 22 - 23	... computer, 73, is caused to load information of said intermediate generation set at particular RAM.
a computer program and	Page 356, lines 9-27	<p>Computer program instructions, of the sort well known in the art, are also inputted to computer, 73, and computer, 73, is caused to execute said instructions. Executing said instructions causes computer, 73, to generate information of a program instruction set. (Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")</p> <p>For example, when executed, one particular intermediate generation set that is inputted to computer, 73, causes computer, 73, in a fashion that is described more fully below, to generate particular program instruction set information of the combined medium programming of program unit Q.</p> <p>Computer, 73, can receive and be caused to execute intermediate generation set information in any fashion that a computer receives and is caused to execute computer program instructions.</p>
a portion to be completed by accessing prestored data at said station of a particular kind,	Page 357, line 21 - page 358, line 20	<p>Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. ...</p> <p>Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. ...</p> <p>When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item- of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular</p>

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-		intermediate transmission station. The set information so generated may consist of computer program instructions and/or data.
wherein said computer program is operative to complete said portion when executed at said station of a particular kind, said execution of said computer program enabling a processor at said station of a particular kind to	Page 358, lines 1-21	<p>Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. (For example, in the case of unit Q, the intermediate generation set lacks information of the particular discount formulas and items offered as cents-off coupon specials that apply at the scheduled time of the transmission of unit Q at the particular supermarket or markets that are local to the station of Fig. 6.)</p> <p>When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item-of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station. The set information so generated may consist of computer program instructions and/or data.</p>
select a specific datum from said prestored data and place information, which results from a processing of said selected datum, into said portion to be completed, thereby completing said programming; and	Page 364, line 25 - page 365, line 21	<p>Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory ...</p> <p>Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, ... generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)</p>
storing a control signal, which is operative at at least one particular kind of station, said control signal operative to cause said execution of said computer program,	Page 359, line 3 - page 360, line 2	<p>(Hereinafter, said message is called the "generate-set-information message (#9)".) Said message is addressed to ITS computers, 73, and contains a particular execution segment, ... an information segment whose information is the intermediate generation set of Q, and an end of file signal. (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program</p>

Claim Language	Spec. Location	Specification Language
		<p>instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)</p> <p>Detecting said message causes ... Then receiving the end of file signal that ends said message causes computer, 73, ... to execute the information of said intermediate generation set as a compiled, machine language job.</p>
<p>whereby said station of a particular kind is enabled to deliver complete programming.</p>	<p>Page 364, l. 32 to page 365, l. 13.</p>	<p>Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory (which compiling could be done, in the case of a program written in IBM BASIC, with the IBM BASIC Compiler of the IBM Personal Computer Computer Language Series). Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, (and may have been transmitted to computer, 73, in the generally applicable program instruction set information if said intermediate generation set); generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, (which linking could be done, in the case of a program compiled by the IBM BASIC Compiler with the linker program of the IBM Disk Operating System of the IBM Personal Computer Computer Language Series).</p>
<p>58. (Amended) The method of claim 57, wherein said prestored data designates programming transmitter data, said method further comprising the step of</p>	<p>Page 354, line 35 - page 355, line 14</p> <p>Page 358, lines 10 - 20</p>	<p>For sake of example, program units, Q and D, above are combined medium programming of the same sort as "Wall Street Week" except that computer, 73, must insert one or more particular locally generated program instruction sets into a local transmission of the programming of each of said program units. For example, program unit Q is a spot commercial of a supermarket chain that describes discounts and so-called "cents-off coupon specials" at local supermarkets. The particular formulas that apply to discounts and the particular items on special vary from specific supermarket to specific supermarket and from time to time, and the information in the embedded program instruction sets of any given transmission of unit Q must reflect the particular formulas and items that apply at specific local supermarkets at the time of said transmission.</p> <p>When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a</p>

Claim Language	Spec. Location	Specification Language
		given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item- of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station.
receiving and storing programming transmitter data.	Page 363, lines 4 - 24	<p>For any given transmission of the television commercial of program unit Q, the following variables are also data that are pre-entered into computer, 73, and recorded in said local-formula-and-item information: p, q, d, Z, r, s, and dd.</p> <p>At the aforementioned interval Q time prior to the scheduled playing of Q, when computer, 73, commences generating said program instruction set, the local-formula-and-item information of computer, 73, includes information that:</p> <p style="padding-left: 40px;">a is 1000.00 p is .00625 q is .12 d is .1 Z is 275 r is .007 s is 2.00 dd is .11</p>
59. (Amended) The method of claim 57, wherein said prestored data designates subscriber data, said method further comprising the step of storing subscriber data.	Page 485, lines 14 - 22	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion. Automatically, in a fashion well known in the art, microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F...
60. (Amended) The method of claim 57, wherein said control signal comprises a series or stream of sequentially transmitted control instructions, said method further comprising the step of	Page 59, lines 31-33	The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
storing in said control signal two or more control instructions in a specific order with information designating a time period.	Page 367, line 30 - page 368, line 20	<p>Immediately after commencing to transmit said programming of Q, recorder, 76, plays and transmits three SPAM messages that are embedded in the prerecorded programming of Q.</p> <p>The first message is addressed to URS signal processors, 200, and causes subscriber stations that are tuned to the channel of transmission of said modulator, 83, to combine their microcomputers, 205, to the computer system</p>

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	<p>Page 368, lines 8 – 11 (emphasis added)</p> <p>Page 369, l. 20 to p. 371, l. 10.</p>	<p>of said transmission, which transmission is originated by said recorder, 76. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "align-URS-microcomputers-205 message (#9)".)</p> <p>The second message is embedded in the prerecorded programming of Q at a distance after said first message that is sufficient to allow time for apparatus at each of said subscriber stations so to combine. The execution segment of said second message is of the aforementioned pseudo command, and transmitting said message causes decoder apparatus at said subscriber stations each to detect an end of file signal and to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "synch-SPAM-reception message (#9)".)</p> <p>The second message is embedded in the prerecorded programming of Q <i>at a distance after said first message</i> that is sufficient to allow time for apparatus at each of said subscriber stations so to combine.</p> <p>The first message of said series contains execution and meter-monitor segments. (Said first message is called, hereinafter, the "transmit-data-module-set message (#9)".)</p> <p>Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information;</p> <p>In due course, decoder, 77, detects the second SPAM message in the aforementioned series of SPAM messages that are addressed to ITS computers, 73, and transfers said message to computer, 73.</p> <p>Said second message contains execution and meterl monitor segments (and is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#9).")</p>
61. (Amended) The method of claim 60, wherein said series or stream of sequentially transmitted	Page 59, lines 31-33	The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.

Claim Language	Spec. Location	Specification Language
control instructions is to be included in a message stream, said method further comprising the step of	Page 367, line 30 - page 368, line 25	<p>Immediately after commencing to transmit said programming of Q, recorder, 76, plays and transmits three SPAM messages that are embedded in the prerecorded programming of Q.</p> <p>The first message is addressed to URS signal processors, 200, and causes subscriber stations that are tuned to the channel of transmission of said modulator, 83, to combine their microcomputers, 205, to the computer system of said transmission, which transmission is originated by said recorder, 76. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "align-URS-microcomputers-205 message (#9)".)</p> <p>The second message is embedded in the prerecorded programming of Q at a distance after said first message that is sufficient to allow time for apparatus at each of said subscriber stations so to combine. The execution segment of said second message is of the aforementioned pseudo command, and transmitting said message causes decoder apparatus at said subscriber stations each to detect an end of file signal and to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "synch-SPAM-reception message (#9)".) Thereafter, embedding and transmitting any given SPAM message in said transmission invokes a controlled function or functions at particular ones of said decoder apparatus.</p> <p>The third message invokes broadcast control of the microcomputers, 205, of said stations ...</p>
storing an instruction which is effective to instruct said processor to process at least one message of said message stream.	Page 369, lines 3 – 31 (emphasis added)	<p>Causing recorder, 76, to play unit Q causes the decoder, 77, of the station of Fig. 6 then to detect a series of SPAM messages that are embedded in the programming of Q and <i>are addressed to ITS computers, 73</i>. Detecting said messages causes decoder, 77, to transfer said messages to computer, 73. (Decoder, 80, can detect and transfer said messages to computer, 73, but in respect to any given embedded signal in a programming transmission, computer, 73, is preprogrammed to operate under the control of just one decoder; decoder, 77 or 79, is the default decoder for transmissions from recorder, 76 or 78 respectively, and signal processor, 71, contains the default decoder of any given transmission received at a receiver; and computer, 73, is preprogrammed to operate under the control of signals from</p>

Claim Language	Spec. Location	Specification Language
		<p>decoder, 80, only for verifying the transmission of signals unless its methods of processing signals from decoder, 80, are changed in a predetermined fashion.)</p> <p>The first message of said series contains <i>execution</i> and meter-monitor <i>segments</i>. (Said first message is called, hereinafter, the "transmit-data-module-set message (#9)".)</p> <p>Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).")</p>
62. (Twice Amended) The method of claim 57, wherein said portion to be completed comprises generally applicable information.	Page 357, lines 20-29	<p>Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick".</p>
63. (Amended) The method of claim 62, wherein said generally applicable information is to be included in machine language code.	<p>Page 359, line 3 - page 360, line 2</p> <p>Page 363, line 34 - page 365, line 21 (emphasis added)</p>	<p>(Hereinafter, said message is called the "generate-set-information message (#9)".) Said message is addressed to ITS computers, 73, and contains a particular execution segment, ... an information segment whose information is the intermediate generation set of Q, and an end of file signal. (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)</p> <p>Detecting said message causes ... Then receiving the end of file signal that ends said message causes computer, 73, ... to execute the information of said intermediate generation set as a compiled, machine language job.</p> <p>Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. Automatically, computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; computes the value of variable b, under control of intermediate generation set instructions of equation (2), to be 62.21875; computes the value of variable c, under control of intermediate generation set instructions of equation (3), to be 2.117; and replaces particular variable values, a, b, and c, in a</p>

Claim Language	Spec. Location	Specification Language
		<p>particular so-called "higher language line of program code" <i>that is among the aforementioned generally applicable information of said program instruction set</i> and is:</p> <p>$Y = a + b + (c * X)$ [which is equation (1) in the language of the IBM BASIC of the IBM Personal Computer Hardware Reference Library] with said selected information of a and the so computed information of b and c to become formula-and-item-of-this- transmission information of:</p> <p>$Y = 1000.00 + 62.21875 + (2.117 * X)$ [which is formula-and-item-of-this-transmission information in said BASIC]. Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory (which compiling could be done, in the case of a program written in IBM BASIC, with the IBM BASIC compiler of the IBM Personal Computer Computer Language Series). Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, (and may have been transmitted to computer, 73, in the generally applicable program instruction set information if said intermediate generation set); generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, (which linking could be done, in the case of a program compiled by the IBM BASIC Compiler with the linker program of the IBM Disk Operating System of the IBM Personal Computer Computer Language Series). One of said other compiled object modules is a module that, when accessed in a fashion well known in the art, computes the shortest vehicle driving distance between any two locations in the local vicinity of the station of Fig. 6 when passed two street addresses of said vicinity. (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)</p>
<p>64. (Twice Amended) The method of claim 62, wherein said generally applicable information includes higher language code and</p>	<p>Page 363, line 34 - page 365, line 21 (emphasis added)</p>	<p>Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. Automatically, computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; computes the value of variable b, under control of intermediate generation set instructions of equation (2), to be 62.21875; computes the value of variable c, under control of</p>

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Claim Language	Spec. Location	Specification Language
		include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point). To position the start point (or another selected point) of a given program unit at the play heads of a given recorder, 76, computer, 73, instructs switch, 75, to configure its switches so as to transfer the transmission input from said recorder, 76, to no output. Then by instructing recorder, 76, to play and decoder, 77, to detect SPAM information in a particular location or locations, computer, 73, causes decoder, 77, to detect and transfer to computer, 73, said program unit and distance information. Receiving said information causes computer, 73, to cause recorder, 76, to stop playing; to analyze said distance information in a predetermined fashion; and to compute the precise time required to rewind to reach the start of the program unit or to move fast forward to reach the end. Then automatically, computer, 73, causes said recorder, 76, first, to start rewinding or moving fast forward then to stop after the precise time elapses.
73. (Amended) The method of claim 57, wherein said storage station is an intermediate transmitter station, said method further comprising the step of transmitting said first programming.	Page 325, lines 5 - 8 Page 347, lines 4 - 5 Page 484, lines 12 - 17	Programming ... on prerecorded videotapes and videodiscs. ... on video recorders, 76 and 78, or other similar equipment well known in the art, thereby causing said recorder, 76, to record the programming of program unit Q ... At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 ...
74. (Amended) The method of claim 57, wherein said storage device is an ultimate receiver station.	As regards the effect of the program instruction set, page 490, line 35 - page 491, line 16 Page 484, lines 12 - 17	... causes each subscriber station that has completed the generation of first overlay image information at video RAM to combine its specific image information with the conventional video information transmitted by said studio and cause its specific monitor, 202M, to display the combined specific image information and transmitted video information. At the station of Fig. 7 and 7F, ... And automatically \$1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 ...

Claim Language	Spec. Location	Specification Language
-	Page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
82. (Twice Amended) A method of enabling a mass medium programming storage device to store and deliver mass medium programming,	Page 324, lines 8 - 11	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming.
	Page 1, lines 27 - 28	But television, radio, and broadcast print are only mass media.
	Page 11, lines 6 - 10	The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
	Page 347, lines 4 - 5	... thereby causing said recorder, 76, to record the programming of program unit Q ...
	Please note page 355, lines 15 - 17	Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations.
	Page 367, lines 25 - 26	Causing recorder, 76, to play causes recorder, 76, to transmit programming of Q, ...
	Page 357, lines 2 - 3	... television programming such as the programming of unit Q, ...
said storage device comprising a storage location capable of storing said mass medium programming,	Page 347, lines 4 - 5	... thereby causing said recorder, 76, to record the programming of program unit Q ...
a transfer device capable of communicating said mass medium programming to and from said storage location,	Page 333, lines 15 - 21	Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y.
	Page 332, lines 24 - 31	... causes computer, 73, to cause ... switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D.
and a processor capable of controlling said transfer device and said storage location to receive, store, and communicate said mass medium programming,	Page 329, lines 13 - 15	... causes computer, 73, ... to cause said selected recorder, 76 or 78, to turn ...

Claim Language	Spec. Location	Specification Language
comprising the steps of:	<p>Page 333, lines 15 - 21</p> <p>Page 332, lines 24 - 31</p>	<p>Computer, 73, causes ... causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record ...</p> <p>... causes computer, 73, to cause ... switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ...</p>
receiving an information transmission including said mass medium programming,	<p>Page 343, lines 26 - 32</p> <p>Page 344, lines 24 - 30 (emphasis added)</p>	<p>Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite.</p> <p>... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, ... P, Q, R, ...</p>
said mass medium programming having an identification datum and a programming element which is to be completed regarding a class of data;	<p>Page 344, lines 30 - 32</p> <p>Please note page 355, lines 15 - 17</p> <p>Page 11, lines 5 - 10</p> <p>Page 60, lines 19 - 21</p> <p>Page 359, lines 4 - 8</p> <p>Page 357, line 21 - page 358, line 20</p>	<p>Embedded in each of said program units are SPAM messages containing appropriate "program unit identification code" information ...</p> <p>Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations.</p> <p>The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.</p> <p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments ...</p> <p>Said message ... contains ... an information segment whose information is the intermediate generation set of Q, ...</p> <p>Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. ...</p> <p>Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. ...</p>

Claim Language	Spec. Location	Specification Language
		When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item- of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station. The set information so generated may consist of computer program instructions and/or data.
communicating said information transmission to said storage location;	Page 344, lines 4 - 7	... at the station of Fig. 6, the computer, 73, causes matrix switch, 75, to configure its switches so as to transfer transmissions from receiver, 53, to a selected primary recorder, 76; ...
storing said information transmission at said storage location; and	Page 347, lines 4 - 5 Please note page 355, lines 15 - 17	... thereby causing said recorder, 76, to record the programming of program unit Q ... Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations.
storing at least one of an intermediate generation set and a program instruction set at said mass medium programming storage device,	Page 359, lines 22 - 23 Page 365, lines 7 - 21 Page 324, lines 11 - 21	... computer, 73, is caused to load information of said intermediate generation set at particular RAM. ... a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, ... (Hereinafter, the program instruction set ... is called the "program instruction set of Q".) The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
said at least one of an intermediate generation set and a program instruction set including a control signal which designates at least one of said programming	Page 42, lines 8 - 11	(Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information and/or command information are called "intermediate generation sets.")

Claim Language	Spec. Location	Specification Language
element to be completed and said class of data	<p>Page 24, lines 14 - 16</p> <p>Page 363, line 34 - page 364, line 2</p> <p>Page 485, lines 14 - 16</p> <p>As regards the intermediate generation set, page 364, lines 27 - 28.</p> <p>For example, page 364, lines 8 - 14</p> <p>As regards the program instruction set, page 484, lines 18 - 25.</p> <p>Page 359, lines 4 - 8</p> <p>Page 484, lines 16 - 18</p> <p>As regards the intermediate generation set, page 363, lines 30 - 31</p> <p>Page 364, lines 2 - 3</p> <p>As regards the program instruction set, page 485, lines 14 - 22</p>	<p>(Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>Executing the information of said intermediate generation set causes computer, 73, to generate ...</p> <p>Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates ...</p> <p>... variable values of said generally applicable program instruction set information ...</p> <p>... variable values, a, b, and c, in a particular so-called "higher language line of program code" that is among the aforementioned generally applicable information of said program instruction set and is:</p> $Y = a + b + (c * X)$ <p>As described above, the information of said segment includes formula-and-item-of-this-transmission information of the higher language line of program code:</p> $Y = 1000.00 + 62.21875 + (2.117 * X) \text{ compiled and linked to other compiled information.}$ <p>Said message is addressed to ITS computers, 73, and contains ... an information segment whose information is the intermediate generation set of Q, ...</p> <p>... the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).</p> <p>... given the local-formula-and-item information of p, q, d, Z, r, s, and dd, ...</p> <p>... computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; ...</p> <p>Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ... Automatically, in a fashion well known in the art, microcomputer, 205, accesses its file A:DATA_OF.URS and</p>

Claim Language	Spec. Location	Specification Language
	Page 45, lines 25 - 27	<p>locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F ...</p> <p>("ITS" refers, hereinafter, to intermediate transmission station apparatus, and "URS" refers to ultimate receiver station apparatus.)</p>
<p>and which is operative to complete said programming element to be completed.</p>	<p>As regards the intermediate generation set, page 363, line 34 - page 364, line 1</p> <p>As regards the program instruction set, page 485, lines 14 - 16</p> <p>As regards the intermediate generation set, page 364, line 25 - page 365, line 21</p> <p>As regards the program instruction set, page 486, lines 9 - 27</p> <p>Page 490, l. 35 to page 491, l. 6</p>	<p>Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion.</p> <p>Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...</p> <p>Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory ... Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, ... generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)</p> <p>Then automatically, on a machine language basis and in a fashion well known in the art, said microcomputer, 205, substitutes the value 4.3 for the variable X in the equation:</p> $Y = 1000.00 + 62.21875 + (2.117 * X)$ <p>computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ... Automatically, microcomputer, 205, ... causes binary image information of "\$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.</p> <p>Receiving said message causes each subscriber station that has completed the generation of first overlay image information at video RAM to combine its specific image information with the conventional video information transmitted by said studio and cause its specific monitor,</p>

Claim Language	Spec. Location	Specification Language
		202M, to display the combined specific image information and transmitted video information.
83. (Amended) The method of claim 82, wherein said class of data designates programming transmitter data, said method further comprising the step of:	Page 357, lines 21-29	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick".
storing said programming transmitter data.	Page 356, lines 24-27 Page 357, lines 1-4	Computer, 73, can receive and be caused to execute intermediate generation set information in any fashion that a computer receives and is caused to execute computer program instructions. For example, in the case of television programming such as the programming of unit Q, the particular intermediate set that is inputted to computer, 73, is located on the recording medium of unit Q
84. (Amended) The method of claim 82, wherein said class of data designates subscriber data, said method further comprising the step of:	Page 358, lines 1-9	Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. (For example, in the case of unit Q, the intermediate generation set lacks information of the particular discount formulas and items offered as cents-off coupon specials that apply at the scheduled time of the transmission of unit Q at the particular supermarket or markets that are local to the station of Fig. 6.)
storing said subscriber data.	Page 358, lines 10-20	When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item-of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station.
85. (Amended) The method of claim 82, wherein said control signal comprises sequentially transmitted control instructions, said method further comprising the step of:	Page 367, line 30 - page 368, line 20	Immediately after commencing to transmit said programming of Q, recorder, 76, plays and transmits three SPAM messages that are embedded in the prerecorded programming of Q. The first message is addressed to URS signal processors, 200, and causes subscriber stations that are tuned to the channel of transmission of said modulator, 83, to combine their microcomputers, 205, to the computer system of said transmission, which transmission is originated by said recorder, 76. (Said message and the functioning that said

Claim Language	Spec. Location	Specification Language
		<p>message causes are described more fully below, and hereinafter, said message is called the "align-URS-microcomputers-205 message (#9)".)</p> <p>The second message is embedded in the prerecorded programming of Q at a distance after said first message that is sufficient to allow time for apparatus at each of said subscriber stations so to combine. The execution segment of said second message is of the aforementioned pseudo command, and transmitting said message causes decoder apparatus at said subscriber stations each to detect an end of file signal and to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "synch-SPAM-reception message (#9)".)</p>
<p>embedding in said control signal at least two control instructions in a specific order with information designating a time period.</p>	<p>For example, page 22, lines 9 - 18</p> <p>Page 368, lines 8 - 11 (emphasis added)</p> <p>Page 369, l. 20 to p. 371, l. 10.</p>	<p>In said series in full--and in any one or more subsequent series of instructions--particular instructions are separated, as may be required, by time periods when no instruction that controls the microcomputer, 205, of any station is transmitted which periods allow sufficient time for the microcomputer, 205, of each and every subscriber station to complete functions controlled by previously transmitted instructions and commence waiting for a subsequent instruction, in a waiting fashion well known in the art, before receiving a subsequent instruction.</p> <p>The second message is embedded in the prerecorded programming of Q at <i>a distance after said first message</i> that is sufficient to allow time for apparatus at each of said subscriber stations so to combine.</p> <p>The first message of said series contains execution and meter-monitor segments. (Said first message is called, hereinafter, the "transmit-data-module-set message (#9)".)</p> <p>Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information;</p> <p>In due course, decoder, 77, detects the second SPAM message in the aforementioned series of SPAM messages that are addressed to ITS computers, 73, and transfers said message to computer, 73.</p>

Claim Language	Spec. Location	Specification Language
		Said second message contains execution and meterl monitor segments (and is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#9).")
86. (Amended) The method of claim 85, wherein said sequentially transmitted control instructions comprise a message stream, said method further comprising the step of:	Page 59, lines 31-33 Page 367, line 30 - page 368, line 25	<p>The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Immediately after commencing to transmit said programming of Q, recorder, 76, plays and transmits three SPAM messages that are embedded in the prerecorded programming of Q.</p> <p>The first message is addressed to URS signal processors, 200, and causes subscriber stations that are tuned to the channel of transmission of said modulator, 83, to combine their microcomputers, 205, to the computer system of said transmission, which transmission is originated by said recorder, 76. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "align-URS-microcomputers-205 message (#9)".)</p> <p>The second message is embedded in the prerecorded programming of Q at a distance after said first message that is sufficient to allow time for apparatus at each of said subscriber stations so to combine. The execution segment of said second message is of the aforementioned pseudo command, and transmitting said message causes decoder apparatus at said subscriber stations each to detect an end of file signal and to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "synch-SPAM-reception message (#9)".) Thereafter, embedding and transmitting any given SPAM message in said transmission invokes a controlled function or functions at particular ones of said decoder apparatus.</p> <p>The third message invokes broadcast control of the microcomputers, 205, of said stations ...</p>
storing an instruction which is effective to instruct said processor to process at least one message of said message stream.	Page 369, lines 3 - 31 (emphasis added)	Causing recorder, 76, to play unit Q causes the decoder, 77, of the station of Fig. 6 then to detect a series of SPAM messages that are embedded in the programming of Q and are addressed to ITS computers, 73. Detecting said messages causes decoder, 77, to transfer said messages to computer, 73. (Decoder, 80, can detect and transfer said messages to computer, 73, but in respect to any given embedded signal in a programming transmission, computer,

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		<p>the start point (or another selected point) of a given program unit at the play heads of a given recorder, 76, computer, 73, instructs switch, 75, to configure its switches so as to transfer the transmission input from said recorder, 76, to no output. Then by instructing recorder, 76, to play and decoder, 77, to detect SPAM information in a particular location or locations, computer, 73, causes decoder, 77, to detect and transfer to computer, 73, said program unit and distance information. Receiving said information causes computer, 73, to cause recorder, 76, to stop playing; to analyze said distance information in a predetermined fashion; and to compute the precise time required to rewind to reach the start of the program unit or to move fast forward to reach the end. Then automatically, computer, 73, causes said recorder, 76, first, to start rewinding or moving fast forward then to stop after the precise time elapses.</p>